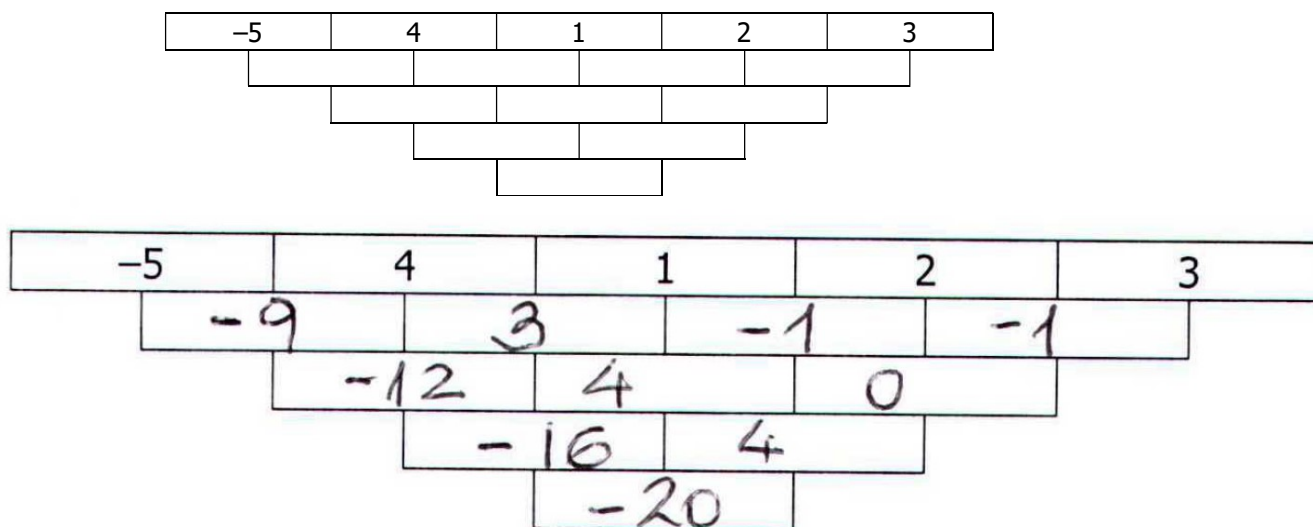


**Surname and name** \_\_\_\_\_

Lessons 04, 05 and 06. AD Integers, decimal numbers and decimal metric system



1. In this 'wall', subtract the right-hand from the left-hand number to find the number in the brick below.



2. Calculate step by step:  $[30 - (-2) \cdot (-8) + 16 : (-2)] - 15 + 3 \cdot [20 - 10 \cdot (-3)] =$

$$[30 - 16 - 8] - 15 + 3 [20 + 30] =$$

$$= 6 - 15 + 3 \cdot 50 = -9 + 150 = \boxed{141}$$

3. Calculate by writing the corresponding algorithm you use to get the result:

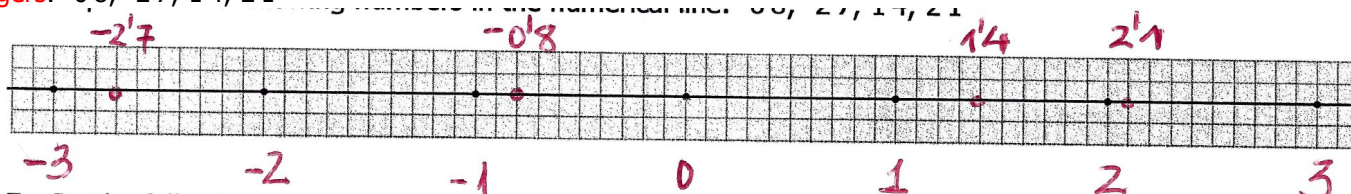
a)  $234 - 187'053 =$

$$\begin{array}{r} 234'000 \\ - 187'053 \\ \hline \boxed{46'947} \end{array}$$

b)  $0'023 \cdot 0'017 =$

$$\begin{array}{r}
 0'023 \\
 \times 0'017 \\
 \hline
 161 \\
 23 \\
 \hline
 0'000391
 \end{array}$$

4. Represent the following numbers in the numerical line. First you have to draw the origin, the unit and the integers: -0'8; -2'7; 1'4; 2'1



5. Do the following:

a)  $0'0876 \cdot 0'001 =$

$$0'0000876$$

b)  $0'0732 : 0'01 =$

$$7'32$$

c) Write in scientific notation: 405 000 000 000 =

$$4'05 \cdot 10^{11}$$

d) Write in decimal form:  $5'432 \cdot 10^7 =$

$$54320000$$

6. Change the value to the indicated unit (include your operations to get the result):

- a) 305.7 mm to dam
- b)  $54.3 \text{ dam}^3$  to hl
- c)  $20.42 \text{ km}^2$  to ha
- d) 4.3 kl to  $\text{dm}^3$



$$a) 305.7 : 10000 = 0'03057 \text{ dam}$$

$$b) 54.3 \times 1000000 = 54300000 \text{ dm}^3 : 100 = 543000 \text{ hl}$$

$$c) 20.42 \text{ km}^2 \times 100 = 2042 \text{ ha}$$

$$d) 4.3 \times 1000 = 4300 \text{ dm}^3$$

7. We get 2000 l of water after 45 minutes from a water pump<sup>1</sup>. How long does it take to fill<sup>2</sup> a 42 m<sup>3</sup> tank?

| <u>Volume(l)</u> | <u>Time(m)</u> |   |
|------------------|----------------|---|
| 2000             | 45             | $x = \frac{45 \cdot 42000}{2000} = 945 \text{ minutes} =$ $= 15'75 \text{ hours}$ |
| 42000            | x              |   |

8. Answer the following questions. Include your operations.

a) The football pitch is 45 yards wide, what is its width in metres? (A yard is about 90 cm)

$$45 \cdot 0'9 = 40'5 \text{ m}$$

b) I weigh 45 kg, what is my weight in pounds? (A pound is about 450 g)

$$45 : 0'45 = 100 \text{ pounds}$$

c) I paid €80 for 57 litres of petrol, how many gallons did I take? (a gallon is about 3.8 l)

$$57 : 3'8 = 15 \text{ gallons}$$

9. A trader buys 1235 kilos of oranges at 0'43 € per kilo. He got to sell all the merchandise<sup>3</sup> with a profit of 123,56 € in total. At what price, did he sell each kilo? Get your result to two decimal places.

<sup>1</sup> bomba

<sup>2</sup> llenar

<sup>3</sup> Mercancía.



$$\begin{array}{r} 1235.043 = 531'05 \text{ € expenses} \\ 123'56 \text{ € profit} \\ \hline 654'61 \text{ sales} \end{array}$$

$$654'61 : 1235 = 0'53 \text{ € / kg}$$

10. a) What is the absolute value of a number?

It is the distance between the number and zero

b) What does it mean to measure something?

It is the result of comparing a quantity with a unit

c) What is a gram?

It is the mass of a  $\text{cm}^3$  of water

d) What is the volume of a litre?

It is the volume of  $1\text{dm}^3$